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ABSTRACT

This study examines the degree to which young children are influenced by the familiarity of an adult participant in their pretend play with toys which vary in resemblance to highly prototypical objects (e.g., cup-like cups or doll-like dolls). A group of 29 children, mean age 21 months, was divided into two experimental groups balanced by sex; 15 children were assigned to an unfamiliar adult experimenter, and 14 to a familiar one. Each child was observed in two 12-minute play episodes in which pretend play suggestions were made by the experimenter. Results suggest that: (1) pretending with highly prototypical objects is enhanced by thematic proposals of a familiar adult, whereas pretending with less prototypical objects is reduced by these proposals; (2) suggestions from an unfamiliar adult produce a low level of pretending regardless of toy type; (3) children's difficulty in transforming less prototypical objects to suit proposed themes is cognitive rather than motivational; and (4) in the situations studied, girls are more sensitive than boys to the characteristics of people, and boys are more sensitive than girls to the characteristics of materials. (Author/ED)

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The influence of toy type and adult familiarity on the pretend play of 22-month-olds

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Abstract

The study examined whether the familiarity of the adult would influence the degree to which young children pretend with toys which vary in their resemblance to highly prototypical objects (cup-like cups, or doll-like dolls). Results indicate that, whereas pretending with highly prototypical objects is enhanced by the thematic proposals of a familiar adult, pretending with less prototypical objects is reduced by these proposals. Suggestions from an unfamiliar adult produces a low level of pretending regardless of toy type. The findings suggest that children's difficulty in transforming less prototypical objects to suit proposed themes is cognitive rather than motivational. Additional findings indicate that girls are more sensitive than boys to the characteristics of people (when the adult is familiar, girls' pretending is enhanced) and that boys are more sensitive than girls to the characteristics of materials (boys pretend less than girls when the toys are less prototypical). It was argued that the results support the view that pretending with less prototypical materials reflects the child's ability to manipulate mental representations of objects and thus indexes children's cognitive maturity.

The influence of toy type and adult familiarity on the pretend play of 22-month-olds

According to developmental theorists, the ability to treat one thing as if it were another is a major milestone of cognitive development during the second year of life (Stern, 1924; Piaget, 1962; Furth, 1969; Werner & Kaplan, 1964). When pretend play first appears (between 12 and 18 months) it is dependent on the physical presence of highly prototypical objects--cup-like cups, doll-like dolls. The child might bring an empty cup to his lips, tip his head back as if to drain the last drop, and then feed a doll with the empty cup. Recent studies indicate that a major transition occurs between 18 and 24 months. During this period the child becomes increasingly likely to enact the same pretend sequences with less prototypical materials--a shell might be used as if it were a cup, a stick as if it were a doll (Fein & Robertson, 1974). It has been argued that the transition marks the child's ability to manipulate mental representations of objects (Millar, 1968; Fein, 1974) and thus constitutes an index of cognitive maturity.

Although investigators have speculated about the role of familiar, playful adults in the development of pretending (El'Konin, 1966), there is relatively little evidence regarding adult influences during its early stages. Suppose a child is asked by an adult to pretend that a truck-like truck is a truck, or that a cup-like cup is a cup. In a sense, the objects support the adult's request--the child knows what the objects are and how they are supposed to be used. The attributes of the adult might be relatively unimportant when pretending is dominated by the attributes of the materials. But suppose the same request is made with a less prototypical object. Here the child must be able and willing to go along with the adult's suggestion, so that whether he pretends might be a function of either his cognitive ability or his feelings about the adult.

In addition, there is evidence that children's pretend play is exceedingly sensitive to aspects of the social setting (Sears, 1947), and that for young children play tends to be suppressed by a stranger (Ainsworth & Bell, 1970), although the effect becomes attenuated during the second year of life (Maccoby & Feldman, 1972). Additional evidence that play is not suppressed in the presence of someone with whom the child has had some previous contact suggests that "stranger" is not a fixed and unchanging attribute of people (Rheingold & Eckerman, 1973; Ricciuti, 1974) and that repeated contact leads to the conversion of strangers into friends. The present study examined the possibility that the participation of a familiar adult in the play of young children would enhance pretending. Furthermore, if pretending with less prototypical objects is governed by the child's feelings toward the adult, rather than by a cognitive limitation, a strange adult should increase the difference between toy types whereas a familiar adult should reduce these differences.

Method

Subjects

The subjects were 30 middle class Caucasian children (15 boys and 15 girls) selected from hospital birth records. At the time of testing, the mean age of the children was 21 months, 20 days. One girl was dropped due to equipment failure, so that in the final analysis there were 15 children (8 boys and 7 girls) in the unfamiliar group and 14 children (7 boys and 7 girls) in the familiar group.

Procedure

Design. The study examined the factors of adult familiarity, sex, toy type,

presentation order and intra-episode time. Each child was observed with two sets of toys (highly prototypical and less prototypical), with presentation order balanced within cells. Each 12-minute play episode was divided into three 4-minute time periods, so that changes over episodes could be examined. It was possible to manipulate adult familiarity by selecting children who had participated in two longitudinal studies over the previous 9-month period. Approximately 80% of the available subject pool was tested. In the familiar condition children were tested by the female experimenter who had visited the home monthly for approximately nine, one-hour visits. In the unfamiliar condition, they were tested by a female experimenter they had not seen more than once before. The familiar experimenter's previous contact with the child varied from naturalistic observations in which there was little interaction with the child, to tests of language comprehension or cognitive development. Children were randomly assigned to familiar-unfamiliar groups. Since a total of four experimenters were involved in each role (two for approximately half the children in each longitudinal study), the familiar-unfamiliar manipulation was not linked to specific individuals or particular prior experiences.

Experimental sessions. Each child was observed in the laboratory with his mother present. Each session consisted of a 15-minute warm-up session and two play episodes of 12 minutes each (in which the procedure was identical, but the toys were different), separated by approximately 20 minutes of intervening tasks which were the same for all children. A female experimenter presented the toys to the child and administered the intervening tasks, while the observer recorded (within 10-second time intervals) the child's behavior through a one-way mirror. The objects in each set were intended to represent the following categories: doll, crib, blanket, truck, phone, pot, cup, spoon, baby bottle,

tissue. As in previous studies (Phillips, 1945; Fein & Robertson, 1974) the toys in the two sets were roughly matched (a doll-like doll to a featureless gingerbread man, a doll-crib to a box, a blanket to a piece of material, a detailed toy truck to a box, a solid pot to a wire basket, a plastic mug to a plastic nesting cup, a baby bottle to a jar, a kleenex to a piece of paper).

Each play episode began with four minutes of free play during which the experimenter chatted with the mother. During the second and third 4-minute periods, the experimenter made a total of five play suggestions which served to introduce common themes across toy sets. The suggestions, presented in a fixed sequence at specific timed intervals were as follows: (1) Phoning: "Phone is ringing" (The experimenter dials and listens). "It's Daddy, Daddy wants to talk to baby." (Hands phone to child.) "Talk to Daddy." After 30 seconds, the experimenter ways "Daddy wants to talk to dolly. Let baby talk to Daddy." (2) Feeding: "Dolly is hungry. The baby is hungry. Feed the baby." (3) Riding: "Dolly wants to go for a ride. Baby wants to go bye-bye. Take the baby bye-bye. Bye-bye baby." (4) Sleeping: "Now baby is sleepy. Baby is so tired. Put the baby night-night. Night-night baby." (5) Grooming: "Baby is dirty. Baby needs to be washed. Wipe the baby all clean."

Measures. Actions, but not verbal labels, were scored "pretends" if they contained an element of make-believe. For example, a child's going through the motions of drinking from an empty cup was scored "pretend", but his pointing to an empty cup and saying "coffee" was not. A child's behaviors were coded "pretend" if they 1) involved treating something inanimate as though it were animate (feeding a doll), 2) resembled normal, functional activities but occurred in the absence of necessary materials (drinking from an empty bottle, scooping food from a pot), 3) were not carried through to their usual outcome (putting on

a hat, but not going outside), or 4) were typically performed by someone else for the child (brushing his own hair). A pretend behavior was coded whenever there was a change in a pretend activity (feeding the doll to hugging the doll) or a pretend object (feeding the doll with a spoon to feeding self with the spoon). An activity maintained over a 10-second period was coded again.

Studies of older children (Phillips, 1945; Pulaski, 1970) suggest that measures of thematic variation and measures of pretend frequency show different effects when toy type is varied. Presumably, less prototypical materials support thematic diversity whereas highly prototypical materials support the repetition of a narrow range of pretend themes. In young children, however, these types of measures tend to be correlated: highly varied pretending is associated with pretending a great deal. The present study used both measures: pretend frequency was the sum of all those behaviors coded pretend and pretend variations was the number of pretend activities which were unique with regard to actions or objects. For example, stirring with a spoon in a red cup five times was scored as one variation, and so was stirring twice with a spoon in a yellow bowl (frequency = 7, variations = 2). Observer agreement was determined from the dual observation of two children. The percent of agreement over all occurrences coded by one or both observers was 88% for pretend frequency and 96% for pretend variations.

Results

Since preliminary analyses failed to reveal effects for order, this dimension was collapsed in the following analyses. A multifactor analysis of variance with repeated factors (Winer, 1962) was performed on frequency and variation per 10-second interval. The between subjects factors were sex and familiarity of adult, and the repeated factors were toy type and time-period. Although frequency and variation scores were intended to reflect two dimensions of pretend play, the measures were positively correlated ($r = .906$, $p < .001$) and

the results of the analyses of variance for the two scores were closely parallel. Thus in young children, amount and diversity of pretending is closely linked.

As indicated in Table 1, the main effects of sex, familiarity, toy type, and time were significant for both measures. A significant interaction between sex and familiarity of adult was also found on both measures. The interactions between sex and toy type and between the familiarity, toy type and time were significant only for the variation measure although the frequency measure displayed a similar trend.

Table 1 about here

The two-way interactions indicate that girls were more sensitive to the social dimensions of play, while boys were more sensitive to the play materials. Girls pretended more than boys when they were familiar with the experimenter, ($p < .05$), but when the experimenter was a stranger to the child, sex was not a significant factor (Figure 1). With the LP toys, girls displayed more variations

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Insert Figures 1 and 2 about here

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than boys, whereas with the HP toys, sex was not a significant factor. For boys, the HP toys elicited more pretend play than the LP toys, whereas for girls, toy type did not influence pretending (Figure 2).

Insert Figure 3 about here

Of special interest is the interaction of toy type with familiarity and time (Figure 3). In Time 1, the condition combining the unfamiliar experimenter and the LP toys depressed play significantly below the level of the other three conditions, ($p < .01$), and play remained at that level throughout subsequent time periods. In contrast, play in the Familiar-HP condition increased significantly in Time 2, ($p < .01$), and remained at that level through Time 3. Play in the Unfamiliar-HP and Familiar-HP conditions declined significantly in Time 2 ($p < .01$). In Time 3 there was no change in the Familiar-LP condition, while the Unfamiliar-HP condition again declined significantly ($p < .05$). Two aspects of these results are notable. First, in the presence of a familiar adult during Time 1, play with LP toys was not suppressed, whereas in the presence of a stranger during this period, play was suppressed. Apparently, these materials do not inherently preclude pretend but pretending with them is disrupted by the mere presence of an unfamiliar person. Second, a major change in pretending seemed to occur during the second time period when the adult, shifting to a more intrusive role, proposed how the materials could be used. When the adult was familiar to the child, adult suggestions produced changes in pretending related to the type of toy: pretending increased when proposed themes and toys were congruent, but decreased when the child was explicitly invited to treat one thing as if it were another. Whether the participation of a familiar adult will enhance pretending thus seems related to the child's ability to manage cognitively the transformations requested of him. In contrast, the intrusiveness of an unfamiliar adult degraded pretending, even when toys and suggestions were congruent.

Perhaps children comply with the suggestions of a familiar adult, (especially when the suggestions and the toys appear to be mismatched), even though they are unable to assimilate the proposed themes to their spontaneous pretending. In order to examine this possibility, the child's compliance with the adult's suggestion

within 30 seconds was analyzed. Two marginal results are of interest. First, in contrast to results from the analysis of overall pretending, children tended to comply more with adult suggestions when the toys were less prototypical. Secondly, there was a marginally significant interaction between familiarity and toy type. With highly prototypical toys, children were more likely to comply with the suggestions of a familiar adult, and, with less prototypical toys, they tended to comply regardless of adult familiarity. Thus, when suggestions and toy type were congruent, the children neither played nor complied with the unfamiliar adult. However, when the toys posed problems in the light of adult suggestions, children complied regardless of who the adults were, but were unable to extend that compliance to their spontaneous play even when the adult was familiar to them.

Discussion

Results of the present study suggest that less prototypical materials become troublesome for young children when they are asked to transform them according to externally proposed themes. The notion that the child's difficulty might stem from socio-emotional factors was not supported. Although the participation of a familiar adult enhanced pretending when the materials posed few cognitive demands, the participation of a familiar adult was not able to overcome what appears to be an essentially cognitive limitation. In addition, the materials did not reduce the impact of adult familiarity. An unfamiliar adult suppressed play even when highly prototypical materials were involved.

The findings also bear upon an overlooked aspect of social development--the way children convert strangers into friends. Studies of social development have tended to treat "stranger" as a relatively fixed attribute of people,

ignoring the question of how, with repeated contact, strangers become less strange and, eventually, trusted friends. Apparently, extended contact within a brief period of time reduces the suppressive effect of strangers on children's play (Rheingold & Eckerman, 1973), although the effect does not withstand a two-week separation (Fein & Robertson, 1974). In the present study, nine previous hour-long contacts over a nine-month period made a difference which appeared most strikingly when the adult joined the child's play. Intensity and frequency of contact appear to be important variables in need of further study, along with variables associated with the nature of these contacts.

Complementing conventional stereotypes, boys were more sensitive than girls to dimensions of the physical environment and girls were more sensitive than boys to variations between people. In keeping with previous findings for 20 month olds (Fein & Robertson, 1974), sex differences do not appear with highly prototypical toys, but do appear with less prototypical toys. If pretending with less prototypical toys reflects children's ability to transform one thing into another, and if this ability reflects some aspect of symbolic functioning, then these results are in accord with girls' superiority in other symbolic activities (e.g., language development). Although when the familiar adults are mothers, sex differences found in previous studies are inconsistent (Maccoby & Jacklin, 1973; Goldberg & Lewis, 1969), the present results suggest that, in the presence of the mother, girls respond more positively than boys to non-family members with whom they have had prior contact, whereas sex differences fail to appear when the adult is a stranger. However, the fact that all of the experimenters in the present study were women leaves unresolved the possibility that male experimenters would produce different results.

References

Ainsworth, M. D., & Bell, S. M. Attachment, exploration and separation: Illustrated by the behavior of one-year-olds in a strange situation. Child Development, 1970, 41, 49-67.

El'Konin, D. B. Symbolics and its function in the play of children. Soviet Education, 1966, 8, 35-41.

Fein, G. A transformational analysis of pretending. New Haven: Yale University, in press, 1974.

Fein, G., & Robertson, A. Cognitive and social dimensions of pretending in two year olds. New Haven: Yale University, 1974.

Furth, H. G. Piaget and knowledge. Englewood Cliffs: Prentice-Hall, 1969.

Goldberg, S., & Lewis, M. Play behavior in the year-old infant: Early sex differences. Child Development, 1969, 40, 21-31.

Maccoby, E. E., & Feldman, S. S. Mother-attachment and stranger-reactions in the third year of life. Monographs of the Society for Research in Child Development, 1972, 37, 1 (Serial No. 146).

Maccoby, E. E., & Jacklin, C. N. Stress, activity, and proximity seeking: Sex differences in the year-old child. Child Development, 1973, 44, 34-42.

Millar, S. The psychology of play. London: Penguin Books, 1968.

Phillips, R. Doll play as a function of the realism of the materials and the length of the experimental session. Child Development, 1945, 16, 145-166.

Piaget, J. Play, dreams and imitation in childhood. New York: Norton, 1962.

Pulaski, M. A. Play as a function of toy structure and fantasy predisposition. Child Development, 1970, 41, 531-537.

Rheingold, H. L., & Eckerman, C. O. Fear of the stranger: A critical examination. In H. Reese (Ed.) Advances in child development and behavior. New York: Academic Press, 1973.

Ricciuti, H. Fear and the development of social attachments in the first year of life. In M. Lewis and L. Rosenblum (Eds.) The origins of human behavior: Fear. New York: Wiley, 1974.

Sears, R. R. Influence of methodological factors on doll play performance. Child Development, 1947, 18, 190-197.

Stern, W. Psychology of early childhood. New York: Henry Holt and Co., 1924.

Werner, H., & Kaplan, B. Symbol formation. New York: Wiley, 1964.

Winer, B. J. Statistical principles in experimental design. New York: McGraw-Hill, 1962.

Footnotes

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TABLE 1

Analysis of Variance for Frequency and

Variation Measures (significant findings)

Source	df	F ratio	
		Frequency	Variations
Adult Familiarity (F)	1	6.921*	6.743*
Sex (S)	1	7.192*	4.943*
S x F	1	4.182*	5.958*
Between Ss error	25		
Toy Type (TT)	1	18.419***	7.892***
S x TT	1	NS	5.317*
Within Ss error (a)	25		
Time Period (TP)	2	3.326*	NS
F x TP	2	5.794**	NS
F x TT x TP	2	NS	5.562**
Within Ss error (b)	56		

*. $p < .05$ ** $p < .01$ *** $p < .001$

Figure 1. Mean scores for Pretend Variation per 10-second interval as a function of sex and familiarity.

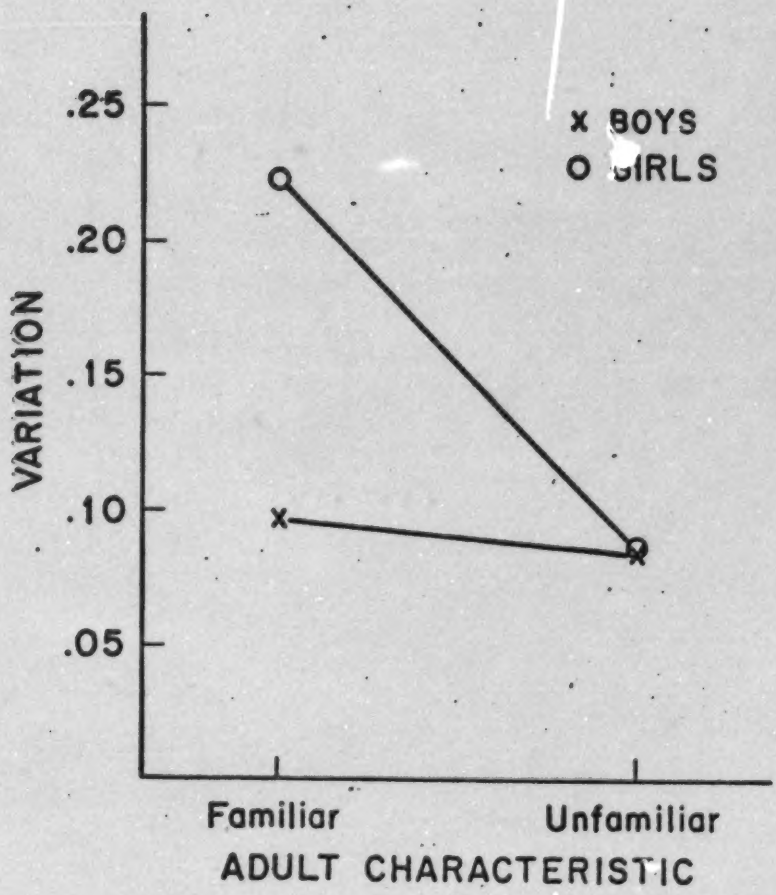
.25
.20
.15
.10
.05
VARIATION
x BOYS
O GIRLS
Familiar
Unfamiliar
ADULT CHARACTERISTIC

Figure 2. Mean scores for Pretend Variation per 10-second interval as a function of sex and toy type.

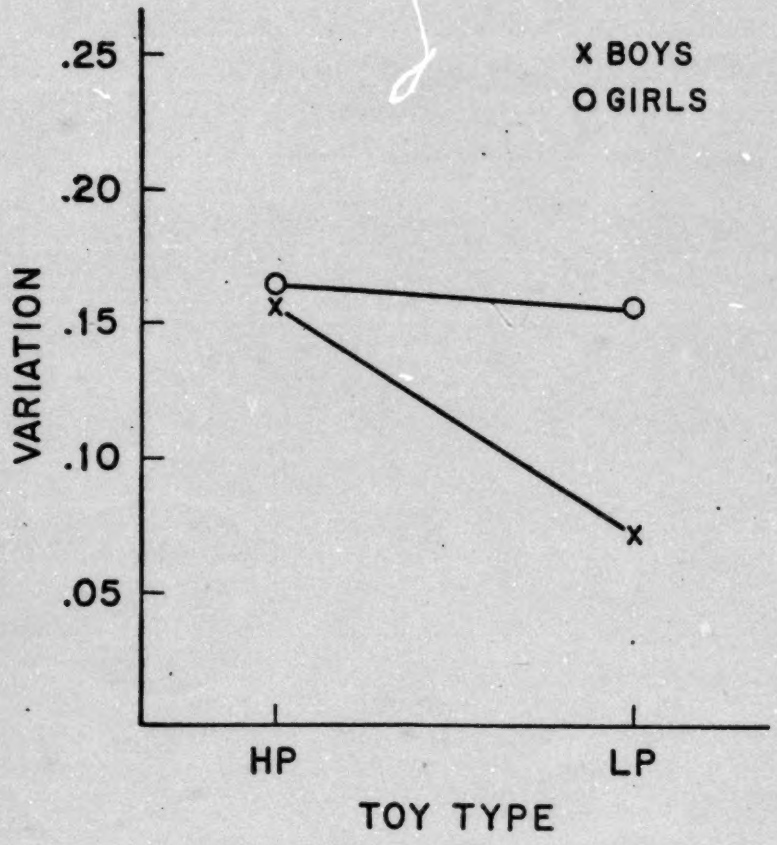

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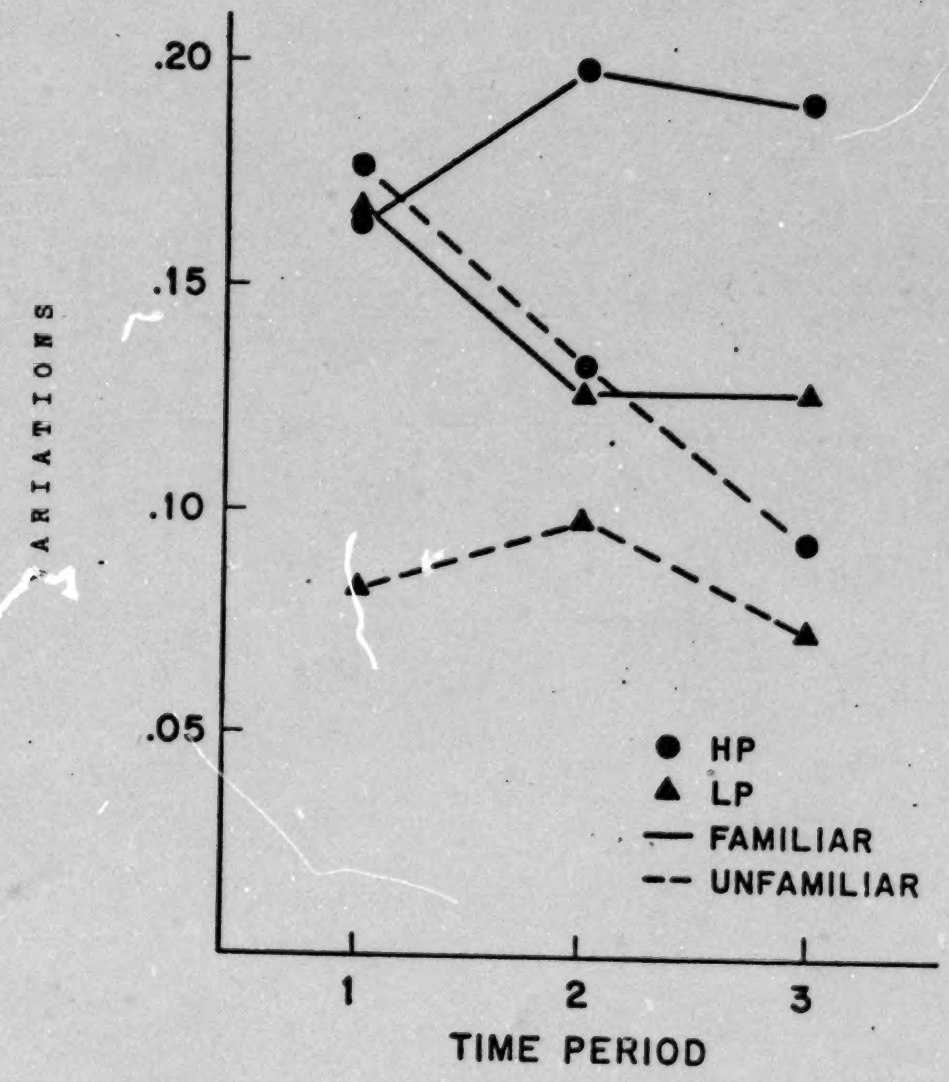
Figure 3. Mean scores for Pretend Variations as a function of familiarity, toy type, and time.


.20
.15
.10
.05
VARIATIONS
HP
LP
FAMILIAR
UNFAMILIAR
1
2
3
TIME PERIOD